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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,202	08/31/2000	Sang-Seok Lee	8733-291-00	4707
30827	7590	12/14/2004	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			DUONG, THOI V	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	
			2871	
DATE MAILED: 12/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/653,202

Applicant(s)

LEE ET AL.

Examiner

Thoi V Duong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 ~~is/are~~ pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-8, 10-15 and 19-21 ~~is/are~~ allowed.  
6) ☒ Claim(s) 9 and 16-18 ~~is/are~~ rejected.  
7) ☒ Claim(s) 22-24 ~~is/are~~ objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This office action is in response to the Amendment filed September 15, 2004.

Accordingly, claim 9 was amended. Claims 1-24 are currently pending in this application.

### ***Response to Arguments***

2. Applicant's arguments with respect to claim 9 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makino (USPN 6,259,505 B1).

As shown in Fig. 8(a), Makino discloses a method of forming a liquid crystal display panel 1, comprising:

forming a common electrode 16 (opposed electrode) on a first substrate 30b;

forming a plurality of conductive contact dots 74 consisting of upper and lower sides at the corner portions of the first substrate 30b (col. 13, lines 48-52);

forming a seal pattern 62 on a second substrate 30a, the seal pattern having a plurality of semicircular bent portions formed around the conductive contact dots, the semicircular bent portions each having an open portion and an arc portion opposite the

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open portion, the arc portion being closer to a display region of the second substrate than the open portion, wherein each semicircular bent portion circumvents the conductive contact dot 74;

assembling the first substrate and the second substrate (Fig. 8(b)); and

forming a liquid crystal layer L between first and second substrates (Fig. 8(b)).

Since the conductive contact dot 74 consists of an upper side and a lower side, it is obvious that the upper side of the conductive contact dot is formed on the first substrate 30b and the lower side of the conductive contact dot is formed on the second substrate 30a for electrical conduction between the first substrate 30b and the second substrate 30a (col. 13, lines 48-52).

Re claim 16, the display region V is defined within a closed formation of the seal pattern 62 (Fig. 8(a) and col. 13, lines 54-60).

Re claims 17 and 18, the conductive contact dot 74 is located outside the display region V (Fig. 8(a)).

#### ***Allowable Subject Matter***

5. Claims 22-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Please see below reasons for allowance for claims 10-12.

6. Claims 1-8, 10-15 and 19-21 allowed.

The following is an examiner's statement of reasons for allowance:

Re claims 1 and 5-7, none of the prior art of record suggests or discloses alone or in combination that a seal pattern has a plurality of triangular bent portions, each having an open side and a vertex opposite the open side, the vertex directed toward an inside a display area of the second substrate, wherein each triangular bent portion circumvents a conductive contact dot.

Re claims 10-12, none of the prior art of record suggests or discloses alone or in combination that a seal pattern has a plurality of semicircular bent portions, the semicircular bent portions being bent toward an inside of the second substrate wherein each semicircular bent portion circumvents a conductive contact dot,

wherein, re claim 10, each of the two ends of the semicircular bent portion has a radius of 0.5 to 2 mm;

wherein, reclaim 11, the semicircular portion has a radius of 2.5 to 10 millimeters;  
and

wherein, re claim 12, a distance between a conductive contact dot and a semicircular portion is 0.1 to 5 millimeters.

The most revelant reference, USPN 6,636,192 B1 of Saitoh, fails to disclose or suggest a seal pattern having a plurality of triangular bent portions or a seal pattern having a plurality of semicircular bent portions with the above dimensions. The Saitoh's reference only discloses a sealing pattern having a plurality of bent portions without any specific dimensions. The bent portions of the seal pattern 200 are bent toward an inside of the second substrate, wherein each semicircular bent portion circumvents a conductive contact dot 56 as shown in Fig. 9B.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong 

12/03/2004

  
TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER